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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/532,610

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EXAMINER

ALI, FARHAD

ART UNIT

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2146

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/532,610	Applicant(s) CLARK, JONATHAN A	
	Examiner FARHAD ALI	Art Unit 2146	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 February 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>03/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Apostolopoulos et al. (US 6,868,083).

Apostolopoulos et al. discloses:

Claim 1

A user terminal for accessing data from a internet application over a distributed information network (**Column 4 Lines 20-26, “The network 150 can be a cellular telephone network (e.g., Third Generation (3G) cellular system), a packet network, the Internet, an intranet, a local network (e.g., a local area network), and a wireless local area network”**), said user terminal comprising:

means for generating a plurality of access requests (**See Fig. 9, #800 “Information Stream”**) for a plurality of duplicate series of packet data from one source over a plurality of routes, each series comprising one instance of each packet of an ordered set of packets (**Column 5 Lines 36-47, “The transmitting device 134 also**

includes a multiple stream generator (MSG) 210 that is coupled to the packetizer 200 for generating at least a first stream 220 and a second stream 230 in response to an information stream 208 (e.g., a stream of packets) and multiple stream generation information (MSGI) 209. The first stream can include a portion of the information stream, the entire information stream, or none of the information stream. Similarly, the second stream can include a portion of the information stream, the entire information stream, or none of the information stream”),

means for accepting the first instance to be received of each packet in the series, and means for assembling the accepted packets into a complete series (**Column 7 Lines 1-8, “The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”).**

Claim 2

A terminal according to claim 1, further comprising means for determining the packet delay and variation over a first route and, if the packet delay and variation exceed acceptable limits in the access network, generating a request for access by means of one or more further routes (**Column 6 Lines 3-16, “The diverse path transmitter 240 can also receive quality of service requirements (QoS) 260 from**

the application (e.g., application 110). The quality of service requirements (QoS) 260 specify parameters, such as minimum required bandwidth, minimum acceptable packet loss, and minimum delay for a particular path. Based on the network information 254, route information 258, and quality of service requirements (QoS) 260, the diverse path transmitter 240 selectively transmits each subset of packets on a predetermined path”).

Claim 3

A terminal according to claim 1, further comprising means for identifying an access route on which packet series delivery has fallen substantially behind others, and means for requesting an adjustment to the delivery process on that access route (Column 7 Lines 13-19, “the receiving device 140 may also employ additional functional blocks in order to improve the performance. For example, the receiving device 140 can be configured to track the communication quality of each path (e.g. packet loss, delay, possible outage, etc.) and communicate this information to the sender. The sender can then in turn use this information to optimize the transmission”).

Claim 4

A terminal according to claim 1, further comprising means for detecting the arrival of the first instance of a packet out of sequence, and means for buffering the said out of sequence packet until the first instance of any packets that should have preceded it are

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received (**Column 7 Lines 1-8, “The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”**).

Claim 5

A terminal according to claim 1, further comprising means for detecting the out of sequence arrival of the first instance of a packet, and means for disregarding the subsequent arrival of all instances of any packets that should have preceded the out of sequence packet (**Column 7 Lines 1-8, “The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”**).

Claim 6

A method of accessing data from a internet application over a distributed information network (**Column 4 Lines 20-26, “The network 150 can be a cellular telephone network (e.g., Third Generation (3G) cellular system), a packet network,**

the Internet, an intranet, a local network (e.g., a local area network), and a wireless local area network”), said method comprising:

generating a plurality of access requests (See Fig. 9, #800 “Information Stream”) for a plurality of duplicate series of packet data from one source over a plurality of routes, each series comprising one instance of each packet of an ordered set of packets (Column 5 Lines 36-47, “The transmitting device 134 also includes a multiple stream generator (MSG) 210 that is coupled to the packetizer 200 for generating at least a first stream 220 and a second stream 230 in response to an information stream 208 (e.g., a stream of packets) and multiple stream generation information (MSGI) 209. The first stream can include a portion of the information stream, the entire information stream, or none of the information stream. Similarly, the second stream can include a portion of the information stream, the entire information stream, or none of the information stream”), accepting the first instance to be received of each packet in the series, and assembling the accepted packets are assembled into a complete series (Column 7 Lines 1-8, “The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”).

Claim 7

A method of accessing data from a internet application over a distributed information network, said method comprising:

Initially making a first access request for a series of data packets to be received over a first route, measuring the packet delay and variation of packets received over the first route and, if the packet delay and variation exceed a predetermined limit, obtaining one or more requests for duplicate series of data packets according to the method of claim 6 **(Column 6 Lines 3-16, “The diverse path transmitter 240 can also receive quality of service requirements (QoS) 260 from the application (e.g., application 110). The quality of service requirements (QoS) 260 specify parameters, such as minimum required bandwidth, minimum acceptable packet loss, and minimum delay for a particular path. Based on the network information 254, route information 258, and quality of service requirements (QoS) 260, the diverse path transmitter 240 selectively transmits each subset of packets on a predetermined path”).**

Claim 8

A method according to claim 6, wherein the duplicate series of packets are obtained using different access servers **(Column 8 Lines 18-30, “A path may be defined by specifying (1) all the nodes to be traversed (i.e., the complete route), or (2) a subset of all the nodes to be traversed (i.e., a partial route). When a subset of all the nodes in a route is specified, this subset may be (1) one or more nodes in**

the beginning portion of a route (the first hop(s)), (2) one or more nodes in the middle portion of a route (the middle hop(s)), (3) one or more nodes in the end portion of a route (the last hop(s)), or a combination of the above. It is noted that these different techniques for specifying the paths may be used irrespective of the manner in which the path diversity is actually achieved (i.e., irrespective of whether a system achieves path diversity via a relay infrastructure, via source routing, or via another approach“).

Claim 9

A method according to claim 6, wherein: if packet series delivery on one access route has fallen substantially behind others, an adjustment to the delivery process is made on that access route **(Column 7 Lines 13-19, “the receiving device 140 may also employ additional functional blocks in order to improve the performance. For example, the receiving device 140 can be configured to track the communication quality of each path (e.g. packet loss, delay, possible outage, etc.) and communicate this information to the sender. The sender can then in turn use this information to optimize the transmission”)**.

Claim 10

A method according to claim 6, wherein if the arrival of the first instance of a packet is out of sequence, the out of sequence packet is buffered until the first instance of any packets that should have preceded it are received **(Column 7 Lines 1-8, “The**

receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”).

Claim 11

A method according to claim 6, wherein:

if the arrival of the first instance of a packet is out of sequence, all instances of any packets that arrive subsequently but should have preceded the out of sequence packet are disregarded (**Column 7 Lines 1-8, “The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format”).**

Response to Arguments

3. Applicant's arguments filed 01/18/2008 have been fully considered but they are not persuasive.

Applicant's arguments with regard to claims 1 and 6:

Apostolopoulos does not mention the feature specifically required by both independent claims 1 and 6, in which the same packets are sent on different streams, with the message assembled from whichever stream in which each individual packet first arrives. The message is therefore compiled from the first instance of each packet to arrive, whichever route that is carried over. This provides better mitigation than Apostolopoulos does against variable delays which do not impact all streams at the same time.

The examiner respectfully disagrees.

Regarding that the packets are sent on different streams, the cited art in the Office action dated 10/18/2007 states in Column 5 Lines 36-47, "The transmitting device 134 also includes a multiple stream generator (MSG) 210 that is coupled to the packetizer 200 for generating at least a first stream 220 and a second stream 230 in response to an information stream 208 (e.g., a stream of packets) and multiple stream generation information (MSGI) 209. The first stream can include a portion of the information stream, the entire information stream, or none of the information stream. Similarly, the second stream can include a portion of the information stream, the entire information stream, or none of the information stream". One of ordinary skill in the art would interpret that a first and second stream capable of including the entire information stream would read upon sending the same packet on different streams. Furthermore,

on Column 13, Lines 9-11, Apostolopoulos discloses "in certain circumstances it may be beneficial to send the same packets in more than one stream".

Regarding means for accepting the first instance to be received of each packet in the series, and means for assembling the accepted packets into a complete series, the cited art in the Office action dated 10/18/2007 states in Column 7 Lines 1-8, "The receiving device 140 includes a packet sorter 310 for receiving the subsets of packets and sorting the packets to recover the original order of the packets. The receiving device 140 also includes a recovery unit 320 coupled to the packet sorter for receiving the packets in original order and for reconstructing the communicated information. A decoder 330 is also provided for un-compressing information in a compressed format". As currently claimed by the applicant, the cited art of reference does provide a means for accepting packets, whichever instance they are, and has a means for assembling these accepted packets into a complete series. The applicant's arguments appear to be directed toward non-acceptance or use of second-instance packets, however, this limitation is not disclosed in the claim language.

Conclusion

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to FARHAD ALI whose telephone number is (571)270-1920. The examiner can normally be reached on Monday thru Friday, 7:30am to 5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jeffrey C. Pwu can be reached on (571) 272-6798. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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/F. A./
Examiner, Art Unit 2146

/Jeffrey Pwu/
Supervisory Patent Examiner, Art Unit 2146